

First

Work Order ID **126400**

126400

Thursday, November 06, 2014 10:51:44 AM

Item ID: 647.4313 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: RH Upper Strut
Start Date: 11/6/2014 Start Qty: 16.00 ***16*** Cust Item ID:
Required Date: 11/6/2014 Req'd Qty: 16.00 ***16*** Customer:
Reference:

Approvals: Process Plan: MCS Date: 11-11-06 Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
647.4300	A

110 0.00

110

Waterjet
FLOW CNC Waterjet

Memo
1-Cut 647.4312 plate 3.928X1.985 as per Dwg
Dwg Rev: A
Prog Rev: A
2-Deburr if necessary

(20)

Dec 14/11/06

DAS
23
9-89

close

120 0.00

120

QC
Quality Control

Memo
QC2- Inspect parts off machine FAI/FAIB

(20)

Dec 14/11/06

DAS
23
9-89

parts missing
16.10.17

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%;"> <tr> <td>Skid-tube ☐</td> <td>Crosstube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>	Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence	☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge ☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other
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130	QC8- Inspect parts - second check	0.00							
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130

QC

Quality Control

Memo

0.00

140

140

Small Fab

Small Fab

Memo

1- Fabricate tube as per dwg by cutting (22.00") one end 27.7 degree and other end punch, bend and drill hole as per dwg

0.00

150

150

QC

Quality Control

Memo

QC5- Inspect part completeness to step on W/O

0.00

0.00

DAS
38
9-89

NOV 10 2014

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FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence	☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge ☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other
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Page 5

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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
220	QC21- Final Inspection - Work Order Release	0.00							
220 QC	Memo	0.00							
Quality Control									

u 16-10-17

DQA: _____ Date: _____



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Picklist Print

Thursday, November 06, 2014 10:51:47 AM

Page 1

Work Order ID: 126400

126400

Parent Item: 647.4313

647 4313

Parent Item Name: RH Upper Strut

Start Date: 11/6/2014

Required Date: 11/6/2014

Start Qty: 16.00

Required Qty: 16.00

Comments: IPP REV:A 12.10.26 NEW ISSUE DD VERF:JLM IPP
REV:B 14.11.06 CHG MATERIAL TO S.S. DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304S16GA		Purchased	No				sf	473.5356		1			
M304S16GA									**			Dec 14/11/06	DAS 23 9-89
304/316 Sheet .063													
				<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>							
				MAT020	360.1356								
				M127821	71.317								
				M129449	192.8186					1,2395			
				M130745	96								
				TPI	113.4								
				M129545	113.4								
M304TR0.500W.049		Purchased	No				f	189.3515		31			
M304TR0 500W 049									**			EL 15-25	
304 RD Tube .500 x .049W													
				<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>							
				MAT017	189.3515								
				M127937	168.548								
				M128833	20.8035								
				130999	x 361								

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FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence	☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge ☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other
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APICAL

INDUSTRIES, INC.

ENGINEERING CHANGE NOTICE NO. 04048

SHEET 1 OF 1

DWG NO. 647.4300

REV: N/C

PREPARED
BY

D. PETERS

DATE: 08/12/13

EFFECT ON DWG
☒ INC. ☐ UNINC.

DWG TITLE: STRUT

APPROVED BY:

ENGR

MFG

QC

EFF

NEXT ORDER

TRANSACTION CODES (TC):
A-ADD C-CREATE
R-REVISE D-DELETE

REASON: MARKED INSPECTION DIMENSIONS

ECR

NONE

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 126400 MJS

14-11-06

DOCUMENTS EFFECTED:

☐ RFMS ☐ MDL ☐ INSTALL INSTRU ☐ ICA ☐ BOM

CHANGE CATEGORY
☐ MAJOR ☒ MINOR

DER REVIEW REQUIRED
☐ YES ☒ NO

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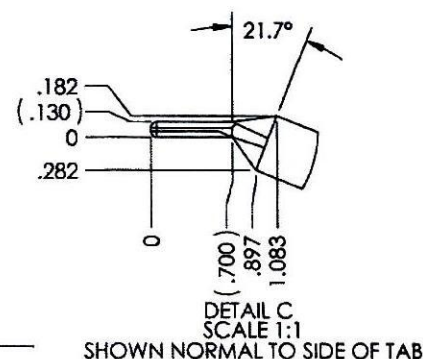
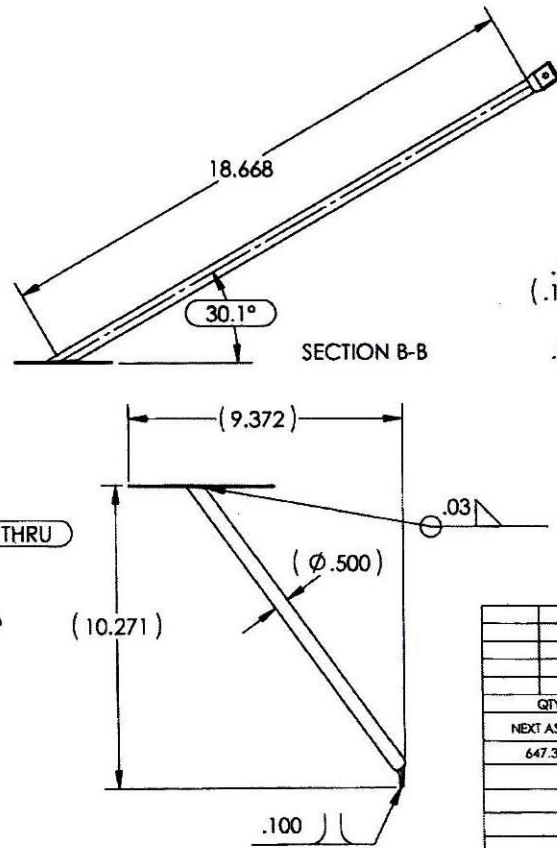
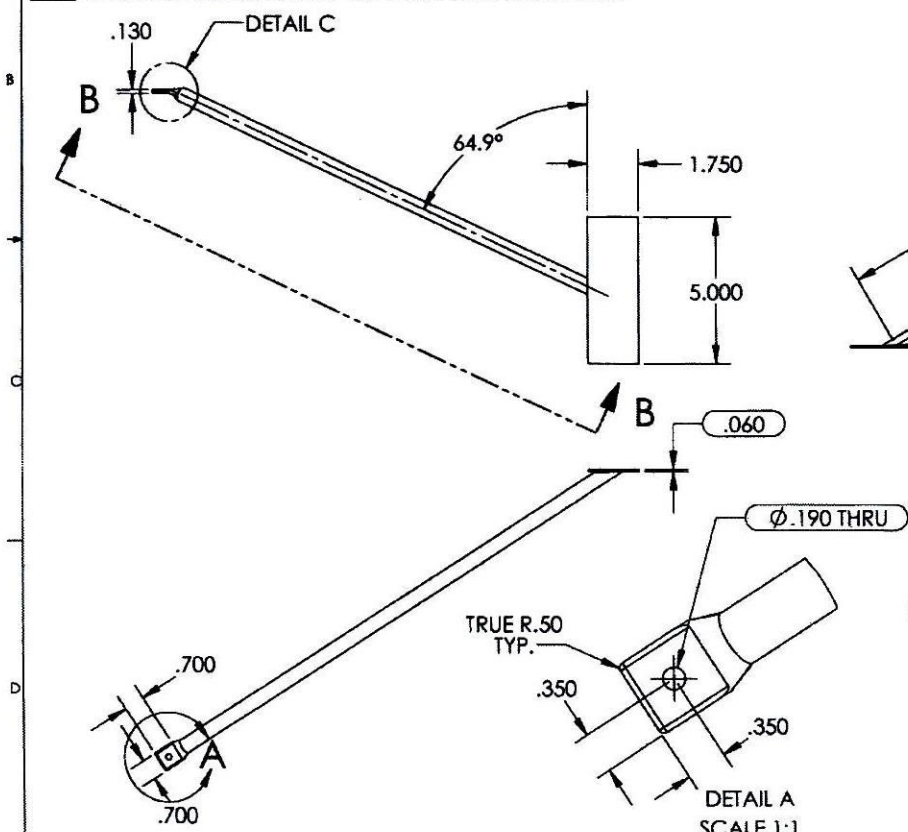
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NOTES: UNLESS OTHERWISE SPECIFIED

1. MATERIAL: 4130 STEEL PER AMS-S-18729, .06" THK.
2. MATERIAL: 4130 STEEL PER AMS-S-18729, .13" THK.
3. MATERIAL: 4130 STEEL PER AMS-T-6736, .50" OD, .049" WALL THK.
4. FINISH: PRIME IAW MIL-P-23377J TYPE I CLASS N; 1-2 MIL MAX
5. DEBURR AND BREAK ALL SHARP EDGES
6. IDENTIFY IAW MPP-120.
7. WELD IAW MIL-STD-2219. TIG WELD WITH FILLER ROD.

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	LAST PROTOTYPE REVISION: PR1		
N/C	INITIAL RELEASE	10/07/09	P. BRAVO
A	INCORPORATED ECH DASH	08/12/13	P. BRAVO

647.4310 SHOWN
647.4311 OPPOSITE



QTY	DESCRIPTION	MATL	SPEC.
647.4313	RH UPPER STRUT	4130	AMS-S-18729
647.4312	LH UPPER STRUT	4130	AMS-S-18729
647.4311	RH LOWER STRUT	4130	AMS-S-18729
647.4310	LH LOWER STRUT	4130	AMS-S-18729

QTY	DESCRIPTION	MATL	SPEC.
647.3700	STRUT	4130	AMS-S-18729

QTY	DESCRIPTION	MATL	SPEC.
647.4300	STRUT	4130	AMS-S-18729

APICAL INDUSTRIES
2608 TEMPLE HEIGHTS DR.
OCEANSIDE, CA. 92056-3512 (760)724-5300

STRUT

647.4300

SCALE NONE SHEET 1 OF 2

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

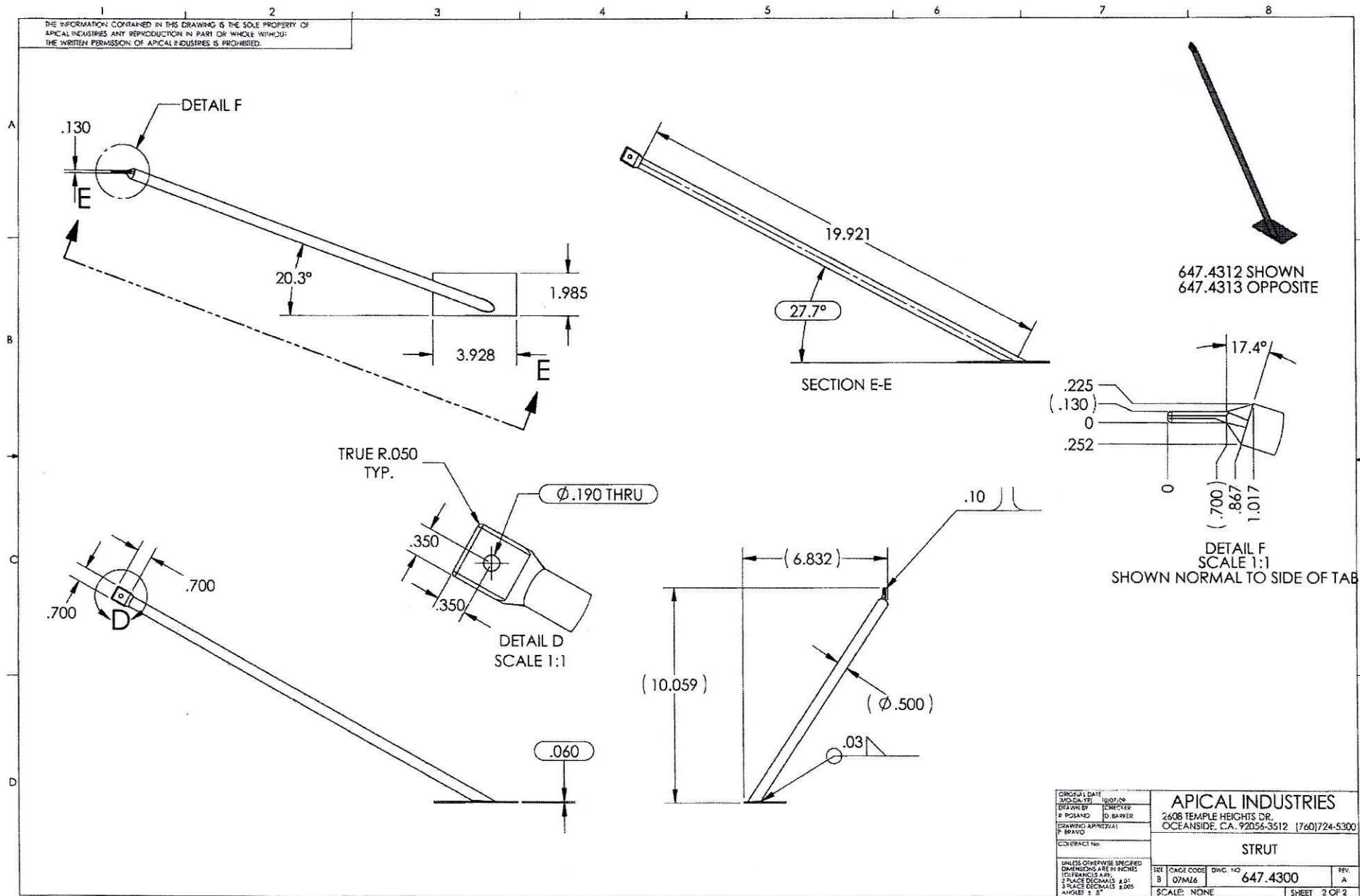
Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%;"> <tr> <td>Skid-tube ☐</td> <td>Crosstube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>	Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐															
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐															
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐															
Large Fab ☐	Composite ☐	Supplier ☐																

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence	☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge ☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other
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DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Crosstube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐
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Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
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Offset/Setup									
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Supplier									
Training									
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FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence	☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge ☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other
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Work Order Summary

Monday, October 17, 2016 8:35:59 AM

Page 1 of 2

Criteria : Work Order ID: 126400 Item ID: 647.4313 Product Family SMALL FAB
 Work Order Start Dates 11/6/2014 to 11/6/2014 11:59:59 PM Work Order Required Dates 11/6/2014 to 11/6/2014 11:59:59 PM
 All References
 Work Order Status Released

Work Order ID	126400	Required Qty	16.0000	Status Code	Released
Item ID	647.4313	Accepted Qty	0.0000	Scrap Qty	0.0000
Item Name	RH Upper Strut				
Current Acct Value	\$73.000				
Start Date	11/6/2014	Required Date	11/6/2014	Completed Date	
Standard	** Actual **	** Acct. Value **	** Variance **	** Variance % **	
Direct Costs	Total	Each	Each	Each	Each
Material	\$5.410	\$0.000	\$125.190	\$125.190	100.00%
Labor	\$219.486	\$0.000	\$0.000	\$0.000	0.00%
Outplant	\$0.000	\$0.000	\$0.000	\$0.000	0.00%
Variable Burden	\$0.000	\$0.000	\$0.000	\$0.000	0.00%
Fixed Burden	\$556.756	\$0.000	\$0.000	\$0.000	0.00%
Material Burden	\$0.000	\$0.000	\$0.000	\$0.000	0.00%
** Total **	\$781.652	\$0.000	\$125.190	\$125.190	

Item ID/Item Name	Required Qty	Issue Code	Issue Date	Issued Qty	Cost Amount
M304S16GA 304/316 Sheet .063	1.0000		11/25/2014	1.2395	\$5.410
Total Matl Amts:					\$5.410

Work Center Large Fab

Employee ID	Rout Seq ID	Labor Date	Setup Hours	Actual Setup Hours	Labor Hours	Actual Labor Hours	Nbr of WOs	Setup Amount	Labor Amount	Fix Burd Amount	Var Burd Amount	Total Amounts
laro01	2/12/2015											
160			0.00	0.00	1.26	1.26	1.00	\$0.000	\$28.086	\$67.414	\$0.000	\$95.500
lepa01	11/25/2014											
160			0.00	0.00	0.14	0.14	1.00	\$0.000	\$3.228	\$7.749	\$0.000	\$10.977
	12/2/2014											
160			0.00	0.00	0.36	0.36	1.00	\$0.000	\$7.983	\$19.160	\$0.000	\$27.143
	2/6/2015											
160			0.00	0.00	1.37	1.37	1.00	\$0.000	\$30.502	\$73.214	\$0.000	\$103.716
Total:			0.00	0.00	3.13	3.13	4.00	\$0.000	\$69.799	\$167.537	\$0.000	\$237.336

Work Center Small Fab

Employee ID	Rout Seq ID	Labor Date	Setup Hours	Actual Setup Hours	Labor Hours	Actual Labor Hours	Nbr of WOs	Setup Amount	Labor Amount	Fix Burd Amount	Var Burd Amount	Total Amounts
FRAN01												
	10/27/2015											
140			0.00	0.00	2.13	2.13	1.00	\$0.000	\$44.970	\$116.073	\$0.000	\$161.043
LARO01												
	2/5/2015											
140			0.00	0.00	1.00	1.00	1.00	\$0.000	\$21.080	\$49.410	\$0.000	\$70.490
140			0.00	0.00	0.38	0.38	1.00	\$0.000	\$8.010	\$18.776	\$0.000	\$26.786
	2/6/2015											
140			0.00	0.00	1.50	1.50	1.00	\$0.000	\$31.620	\$74.115	\$0.000	\$105.735
lepa01												
	12/2/2014											
140			0.00	0.00	1.81	1.81	1.00	\$0.000	\$36.592	\$108.799	\$0.000	\$145.391
Total:			0.00	0.00	6.82	6.82	5.00	\$0.000	\$142.273	\$367.173	\$0.000	\$509.445

Work Center Waterjet

Employee ID	Rout Seq ID	Labor Date	Setup Hours	Actual Setup Hours	Labor Hours	Actual Labor Hours	Nbr of WOs	Setup Amount	Labor Amount	Fix Burd Amount	Var Burd Amount	Total Amounts
conw01												
	11/7/2014											
110			0.00	0.00	0.37	0.37	1.00	\$0.000	\$7.415	\$22.046	\$0.000	\$29.461
Total:			0.00	0.00	0.37	0.37	1.00	\$0.000	\$7.415	\$22.046	\$0.000	\$29.461